

# Functions - more skills.

i) substituting expressions as input values

a)  $f(x) = 2x - 3$

Find  $f(5) = \underline{2(5) - 3 = 7}$

$f(a) = \underline{2a - 3}$

$f(b+3) = 2(b+3) - 3 \Rightarrow 2b+6-3 \Rightarrow \underline{2b+3}$

b)  $f(x) = \frac{1}{4+x}$

Find  $f(-3) = \frac{1}{4+(-3)} = \frac{1}{1} = \underline{1}$

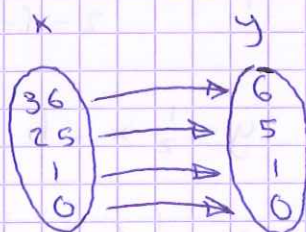
$f(-4) = \frac{1}{4+(-4)} = \frac{1}{0} = \text{undefined.}$

$f(x-4) = \frac{1}{4+(x-4)} = \frac{1}{x}$

$f(x^2) = \frac{1}{4+x^2}$

## II Writing function Rules

write an equation for the following functions.



$y = \sqrt{x}$

$f(x) = \sqrt{x}$

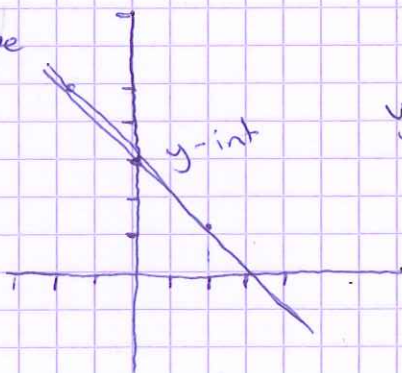
$f: x \mapsto \sqrt{x}$

b)

x	y
-2	7
-1	5
0	3
1	1
2	-1
3	-3
4	-5

y-int - 3

slope -2



$y = mx + b$

$y = -\frac{1}{2}x + 3$